

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
30 June 2005 (30.06.2005)

PCT

(10) International Publication Number
WO 2005/060104 A1

(51) International Patent Classification⁷: **H03L 7/085**,
7/089, 7/191

(21) International Application Number:
PCT/EP2004/014844

(22) International Filing Date:
15 December 2004 (15.12.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
03/14921 18 December 2003 (18.12.2003) FR

(71) Applicant (for all designated States except US): **EADS
TELECOM** [FR/FR]; Rue Jean-Pierre Timbaud, Bâtiment
Jean-Pierre Timbaud, F-78180 Montigny-Le-Brettonneux
(FR).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **ROBBE, Michel**
[FR/FR]; 36 bis, rue du Maréchal Maunoury, F-78700
Conflans-Sainte-honorine (FR). **AISSA, Sami** [FR/FR];
11 Rue Cels, F-75014 Paris (FR).

(74) Agents: **LOISEL, Bertrand** et al.; Cabinet Plasseraud,
65/67 rue de la Victoire, F-75440 Paris Cedex 09 (FR).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,
SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN,
GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

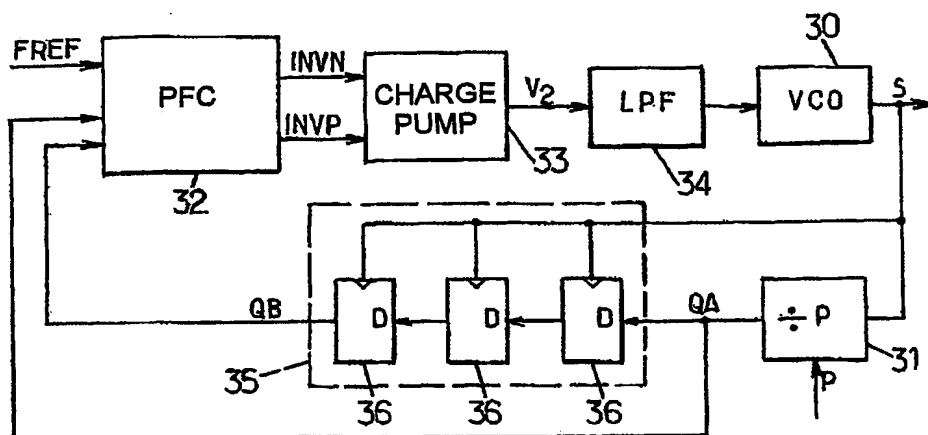
— of inventorship (Rule 4.17(iv)) for US only

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: PHASE-LOCKED LOOP



(57) Abstract: An oscillator (30) supplies a high frequency signal (S) to a frequency divider (31). A phase comparator (32) produces a signal measuring phase difference between the divided frequency signal (QA) and a reference signal. A low-pass filter (34) controls the oscillator on the basis of the measurement signal. A measurement window, of duration defined by counting cycles of the high frequency signal, is generated in response to each active edge of the divided frequency signal. The measurement signal is activated during the measurement window so that it comprises, when an active edge of the reference signal falls within the window, a first pulse between the start of the window and this edge and a second pulse, opposite to the first, between this edge and the end of the window.